

PRODUCT INFORMATION



Protonex™ Red 670 AM

Item No. 44345

Synonym:	Protonex™ Red 670 Acetoxymethyl ester
FW:	521.1
Purity:	≥90%
Ex./Em. Max:	643/660 nm, in acidic environments
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Protonex™ Red 670 AM is supplied as a solid. A stock solution may be made by dissolving the Protonex™ Red 670 AM in the solvent of choice, which should be purged with an inert gas. Protonex™ Red 670 AM is soluble in DMSO.

Description

Protonex™ Red 670 AM is a cell-permeable pH-dependent dye. Protonex™ Red 670 AM displays excitation/emission maxima of 643/660 nm, respectively, with high fluorescence intensity in acidic pH environments and only weakly fluoresces in basic pH environments. It can be used to label or monitor acidic intracellular targets in live cells.

Protonex™ Red 670 AM stock solution

1. Prepare a 10-20 mM stock solution of Protonex™ Red 670 AM in high-quality anhydrous DMSO.

Note: Any unused Protonex™ Red 670 AM stock solution should be divided into single-use aliquots and stored at ≤-20°C. Protect from light and avoid repeated freeze-thaw cycles.

Protonex™ Red 670 AM working solution

1. Prepare a Protonex™ Red 670 AM dye working solution of 5-20 μM in a buffer of choice (e.g., HEPES-buffered Hanks' balanced salt solution (HHBS)).

Note 1: The nonionic detergent Pluronic® F-127 can be used to increase the aqueous solubility of AM esters. The final Pluronic® F-127 concentration should be approximately 0.02% in the staining buffer. Avoid long-term storage of AM esters in the presence of Pluronic® F-127.

Note 2: If your cells contain organic anion transporters (OATs), 1-4 mM probenecid (Item No. 14981) may be added to the dye working solution (final in-well concentration will be 0.5-2 mM) to reduce leakage of the de-esterified indicators.

SAMPLE EXPERIMENTAL PROTOCOL

Important Note

The following is a recommended protocol for loading Protonex™ Red 670 AM dye into live mammalian cells. This protocol should be used as a guideline and modified according to your specific needs.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
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1. Prepare viable cells as desired (e.g., 100 μ l/well for a 96-well plate or 25 μ l/well for a 384-well plate).
2. On the next day, add the Protonex™ Red 670 AM dye working solution into the wells in equal volumes, such as 100 μ l/well for a 96-well plate or 25 μ l/well for a 384-well plate.
3. Incubate the dye-loaded plate in a cell incubator at 37°C for 30-60 minutes.
4. Replace the dye working solution with HHBS or a buffer of choice to remove any excess dye.
5. Prepare the compound plates using HHBS or a buffer of choice.
6. Perform the pH assay as desired while simultaneously monitoring fluorescence. This can be done with either a fluorescence microscope with a Cy5 filter set or a fluorescence plate reader using excitation and emission filters set at 640 and 680 nm, respectively (cutoff 665 nm), to reduce background fluorescence.

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